50. Second stage of the Modelling System at particular level

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Probabilidad Imposible: Second stage of the Modelling System at particular level

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The second stage in any Modelling System in Impossible Probability is the replication stage, in which the Modelling System replicates all the mathematical human skills to make mathematical representations of the world, models.

The Modelling System at a particular level works for the development of all those models about any particular thing or being, to make in the following third stage all the necessary particular decisions regarding this particular thing or being.

At a particular level, the decisions regarding any particular thing or being can be made at two different levels: particular (research, learning, solving maths problems) decisions made at the global level, and particular (research, learning, solving maths problems) decisions made at a particular level.

Particular (research, learning, solving maths problems) decisions made at a a global level, are all those that are made upon the information about a particular thing or being, in order to protect, better, resolve any particular problem, in a particular thing or being, are decisions based on data in the global matrix and/or global/specific rational hypothesis, to make virtual or actual models by the Modelling System in the Global Artificial Intelligence.

Understanding by global deductive program the Artificial Research by Deduction in the Global Artificial Intelligence, and understanding by specific deductive programs all those ones former Specific Artificial Intelligences for Artificial Research by Deduction, that once the coexistence period in the third phase of standardization was completed, in the

second period of consolidation evolve to specific deductive programs within the Global Artificial Intelligence.

Actually, in the second stage of the Global Artificial Intelligence, there should be one specific program for each sub-factoring level in each sub-factor, analysing the constant flow of sub-packages of information in its corresponding sub-factor.

At the global level, particular decisions are possible to be made, by global/specific programs, because the global matrix, gathering information coming up from absolutely all factors and sub-factors, including factors and sub-factors of particular things or beings, in the global matrix could have been set up as a sub-factor itself the whole particular matrix of a particular thing or being, with the possibility to cross and mix this information with information coming up from all possible other factors able to affect that particular thing or being in the reality, and already included in the global matrix.

The main reason for the development of particular decisions by global/specific deductive programs is the possibility to consider any particular thing or being, in a very comprehensive way, including all possible factors or sub-factors in the global matrix able to affect that particular thing or being.

But, at the same time, particular deductive programs having as a first stage of application only a particular matrix, can also make particular decisions.

In the evolution that takes place in the second period of the fifth phase, some Specific Artificial Intelligences for Artificial Research by Deduction become particular deductive programs, as well as other Specific Artificial Intelligences for Artificial Research by Application become particular applications, ending up this process in the third period in the fifth phase, when the relations of collaboration between particular applications and particular programs are ready, for the creation of particular applications for particular programs. Actually, they are at a particular level an experiment about how to integrate at the global level the Unified Application and the Artificial Research by Deduction in the Global Artificial Intelligence, including all the specific deductive programs already created.

The main advantages of two different particular decisions: some made by the Global Artificial Intelligence, and the other by particular programs, are:

- The main advantage in all those particular decisions made by the Global Artificial Intelligence, is: the global matrix in the standardization process, the matrix in the integration process, having already gathered all possible information of the world, is able to make decisions, affecting particular things or beings, considering as a whole in a very comprehensive way all possible factor or sub-factor affecting such particular thing or being, including even possible factors which affecting in one moment or another a particular thing or being, are not integrated yet in the particular matrix in the particular program of that particular thing or being, so that particular decisions at a global level are going to be even more comprehensive than those ones made by particular programs.

- The main advantage in all those particular decisions made by particular programs is: the registration of any change in any factor or sub-factor that could affect the particular thing or being related to that particular program. Change registered in the particular matrix much faster than in the global matrix. The time difference between how fast even the most menial change could be registered, firstly by the particular matrix, in comparison with how fast this same change could be registered by the global matrix, makes a difference (even if it is only a few seconds): the faster, the better.

In fact, there are moments in which different particular programs can each of them make different decisions regarding the same situation, due to their different perspectives. In fact, sometimes, the particular making decision process looks like a triangulation process, in the sense that different points of view, from global and particular perspectives, must be gathered in the Decisional System as a puzzle, to figure out the best decision.

If for the same situation, the Global Artificial Intelligence and particular programs make different decisions, and assuming that it is pretty possible the existence of contradictions between them, these contradictions must be resolved in the Decisional System.

Regardless of any other matter, once the decisions are made in the third stage of the Modelling System, at a global level in the Modelling System in the Global Artificial Intelligence, in particular programs the decisions in the third stage of the Modelling

System in the particular program, all decisions are sent to the database of decisions in the Decisional System, as a first stage of the Decisional System.

The second stage of the Decisional System consists of the mathematical project upon the decisions, remaining the most rational decisions or those that are without contradiction with respect to the mathematical project. Less rational decisions, or contradictions with the mathematical project, are discarded.

In the third stage of the Decisional System, all the accepted decisions are transformed into instructions, and the instructions are sent to the database of instructions in the Application System, to be put into practice.

Finally, this long process is evaluated by the Learning System, making decisions about how to improve and enhance the whole process.

This long process means that, having the possibility of two sources of particular decisions: particular decisions made by the Modelling System in the Global Artificial Intelligence, and particular decisions in the Modelling System in particular programs; and at a particular level, in all those situations where are involved more than one particular program, the possibility of more than one particular decision at a particular level, at the end there are as many particular decisions as programs involved, in addition to the Global Artificial Intelligence.

But the main difference between particular decisions with respect to other types of decisions, as it was said in the previous post "The Modelling System at a particular level", is the fact that particular decisions can be classified in: research decisions, learning decisions, and decisions based on solving maths problems.

Among all of these possible decisions, the research decisions are those based on mathematical models upon rational hypotheses.

In the post "The Modelling System at a particular level", it was explained how research decisions are based on rational hypotheses, and the rational hypothesis formation was

explained in detail, especially how the rational hypothesis must be expressed by the deduction program as a mathematical equation:

- 1.The (global/specific or particular) deduction program tracks all possible combinations of factors in the (global or particular) matrix.

- 2.The data from every single factor within the combination is analysed by the (global/specific, particular) deductive program. In this analysis, the deductive program must analyse the following information:

- 2.1. What kinds of factors are there: a combination of only factors as subjects, a combination of only factors as options, a combination of factors as subjects and as options.

- 2.2. If there is any factor (subjects, options, or both) within the combination working as constants (within a margin of error, constant measures).

- 2.3. If the factors are not working as constants, work as independent variables with respect to each other (in that case, there is no causation between them), or some of them (subjects, options, or both) are independent and the others (subjects, options, or both) are dependent variables.

- 2.3.1. Independent variables are all those whose changes are not due to changes in other variables but to internal processes. For instance, the genetic development of a human being, living on Earth, from birth to death, is independent of the lunar cycles, if there is no relation of causation between lunar cycles and human development. In other words, if there is no relation between the data of our genetic development and the lunar cycles. The genetic human development would be dependent on the lunar cycles if, by any chance, any data in our human genetic development were caused by lunar cycles. If this relation is not found, then both are independent variables.

- 2.3.2. Dependent variables, if there is some data of the human genetic development depending on lunar cycles, this relation of causation could be detected in case that at any time that there is a lunar cycle or a range of lunar cycles, could be identified regularly,

within a margin of error, changes in the data provided by the genetic human development. If this data is found, there is rational evidence of causation. If not, both are independent. Because human knowledge is provisional, even when there are no found relations of causation, every combination of factors must be permanently tracked, evidence of any possibility could be found unsuspectedly at any time, even when we do not expect it.

- 2.4. Having more than one independent variable, what kind of 1) any other stochastic relations could be identified between independent variables, such as possible directly proportional positive correlations, possible directly proportional negative correlations, possible inversely proportional correlations, 2) what possible relations could be there in terms of the Second Method of Impossible Probability, such as equal opportunities or bias, positive or negative, 3) any other cryptographic relation, or mathematical pattern.

- 2.5. For every kind of mathematical relation (stochastic, pattern, cryptographic, equal opportunities or bias) in the pure reason (list of mathematical, analytical, categories of possible relations between factors, in all deductive programs), there must be catalogued a very detailed list of all the possible pure reasons (all the mathematical or analytical categories or relations) as it was described in the post "the artificial method for the scientific explanation, the second stage in the integration process".

2.6. Having a very detailed pure reason including all possible mathematical (pure or analytical) possible relations between factors, and having identified, in the combination, every factor as subject or option and as constant or variable, dependent or independent, according to this information, the deductive program must match the relations found in combination with the right, pure reason, that mathematical (pure or analytical relation) which fits with the information provided by the combination of factors.

3. The synthesis of the data obtained in the combination and the pure reason is an empirical hypothesis regarding the factors involved. The way in which the empirical hypothesis could be formalised is through a mathematical equation expressing the mathematical relations, in accordance with the pure reason chosen, between the factors. In order to get ready the empirical hypothesis for the rational contrastation, the formalization of the empirical hypothesis as an equation could be done through, according to the data and the pure reason, the calculation of cloud of points, slopes and trigonometric data, the value of the constant if any, types of lines and regression lines or curves, and calculation of limits, in order to set up the equation that best defines relations between factors in the combination of factors.

4. The empirical hypothesis, as a mathematical equation, is rationally criticised, taking samples of every factor from the (global or specific) matrix, and choosing, in accordance with the pure reason and the nature of the factors (subjects, factors, or both), the right method to make the rational contrast. First rational check (the seven rational checks were explained in the last post, concretely in the last post "Third stage in the Modelling System in the standardisation process".

5. If the empirical hypothesis as a mathematical equation is found rational, the empirical hypothesis becomes a rational hypothesis, and as a rational hypothesis, the mathematical equation is filed in the database of rational hypotheses, the first stage of the Modelling System. The program responsible for storing each rational hypothesis in the database of rational hypotheses is the same deductive program which was responsible for the deduction. After the rational demonstration, the deductive program files the rational hypothesis in the right file in the database of rational hypotheses.

The rational contrastation process to accept an empirical hypothesis as a rational hypothesis is the first rational check, and in reality, what it does is to confirm that the accuracy of the mathematical equation in the empirical hypothesis is within the acceptable margin of rational error.

The second rational check is made in the database of rational hypothesis, the rational truth, the first stage of application in the Modelling System, checking the application if there is any contradiction between the mathematical equation of the new rational hypothesis, and any other already included in the database, and in case of contradictions, to carry out the research to found out the origin, whether: 1) because the current ones already included are not updated, or 2) a loose margin of error in the acceptation of the new one, 3) any other mistake made during the deduction process, such as the way in which the concrete pure reason was chosen among all the concrete pure reasons on the pure reason list or 4) there is a problem in the way in which a concrete pure reason has been formulated, and in order to be sure that there is a problem in a concrete pure reason, is necessary to keep a record of how many times there are contradictions in rational hypothesis made under the premises of every concrete pure reason, creating a database of pure reasons, counting the frequency in which rational hypothesis related to every concrete pure reason have been found out wrong, in order to make further researches to reformulate those pure reason with the highest frequency of problems. Examples of

pure reasons were given in the post "The artificial method for the scientific explanation".

This database, counting the frequency with which rational hypotheses made under every concrete pure reason have been found wrong in rational checks, should have as many files per pure reason as rational checks, to find out where are more common these contradictions, to think how to reformulate the concrete pure reasons with the highest frequencies.

The third rational check, is the regular rational check that every global/specific program or particular program must carry out on their respective rational hypothesis, checking at regular times that their rational hypothesis included in the rational truth, are still rational or not, and if not rational any longer, to discard them from the rational truth, only remaining all those ones still rational. The necessity of regular rational checks over all rational hypotheses already included is due to the provisionality of rational knowledge, in opposition to pure knowledge.

Only pure knowledge is that one that does not need regular checks because it is not provisional, is timeless (we are not checking all the time that two plus two is four, but we are checking all the time gravity to find out anomalies). The problem is, due to human knowledge limitations, we are only able to achieve pure knowledge on mathematics, and even not at all, and that is why even for us, mathematics is incomplete.

Once rational hypotheses are included in the database of rational hypotheses, the rational truth, as an application for the Modelling System, having passed the first two rational checks, and regularly the third one, in the second stage of the Modelling System, is when the mathematical representation of the world is ready to start.

In order to start the mathematical representation of the world, regarding further particular decisions, which can be made at two levels, at a global level with greater comprehensiveness and at a particular level with greater accuracy, is necessary firstly to identify what databases of rational hypothesis are the applications for this work, and what rational hypothesis include.

At the global level, the database of rational hypothesis, the global rational truth, is the global database of rational hypothesis as an application for the Modelling System working in the Global Artificial Intelligence.

At a global level, the application for the Modelling System in the Global Artificial Intelligence consists of a database of rational hypotheses made by global deductive programs, and specific deductive programs, and it must also receive all the rational hypotheses made by all particular deductive programs. All particular deductive programs must be obliged to send all their particular rational hypothesis to the global database of rational hypotheses as an application for the Modelling System in the GlobalArtificial Intelligence.

The application for the Modelling System in the Global Artificial Intelligence must have absolutely all possible rational hypotheses made by any global, specific, or particular program.

This means that at a particular level, the application for the Modelling System in the Global Artificial Intelligence is going to have, at the particular level: all the particular rational hypotheses made by all the particular deductive programs, and all the global/specific rational hypotheses which affecting a particular thing or being must be considered when the Global Artificial Intelligence has to make a decision regarding a particular thing or being.

At any time that the Global Artificial Intelligence itself must make a decision regarding a particular thing or being is going to have two sources of information: particular rational hypotheses made by particular deductive programs and sent to the global database of rational hypotheses as application for the Modelling System in the Global Artificial Intelligence, and all those rational hypotheses which being made by global/specific deductive programs, as much as they affect a particular thing or being, must be had in consideration for decisions made at a global level regarding a particular thing or being.

The particular database of particular rational hypotheses, within the particular Modelling System of a particular program for a particular thing or being, only includes the particular rational hypotheses made by that particular program.

In any case, both applications, the global database of rational hypotheses and the particular database of rational hypotheses, must carry out the corresponding second rational check, checking if all new rational hypothesis included has any contradiction with the current ones, and in case of contradiction, to search the possible sources. And, in both applications, at regular times, the corresponding deductive program responsible for every rational hypothesis must carry out the third rational check, checking if, over time, its rational hypotheses are still rational.

In the second rational check in the global database of rational hypotheses, due to it is going to include particular and global/specific rational hypotheses, there is a high risk of contradictions between global/specific rational hypotheses and particular rational hypotheses. One of the reasons for this contradiction is the main difference between them: a rational hypothesis made by global/specific programs can be more comprehensive, while a rational hypothesis made by a particular program can be more accurate according to the changes of that particular thing or being in real-time.

At any time, when a contradiction is found, it must be analysed and the source of error, in order to make a very isomorphic mathematical representation of the world.

The most important thing to experiment with when these processes are tested is the speed. The efficiency, efficacy, and productivity in the Global Artificial Intelligence must not be measured in how many decisions are made per hour, but how many decisions are made per minute, second, or less. There are situations in which if a decision takes more than a few seconds, thousands of lives are at risk.

Having identified what applications are going to play a key role in the particular decision process, the corresponding rational checks, and their differences, is time to identify how the models are going to be made in the second stage upon both applications, the second stage.

Firstly, I will develop the process to develop all those global mathematical models, but now more focused on the process to make, at a global level, particular decisions, and later the same process but at a particular level, and finally, the analysis of possible contradictions between them.

Implications at a particular level in the second stage of the Modelling System in the Global Artificial Intelligence (although the Modelling System in the Global Artificial Intelligence in the standardization process has been developed in the corresponding post, here I will develop more deeply the implications of all these models for particular decision processes at global level).

- 1. Single model (the single virtual model)

- 1.1. Single models upon particular rational hypotheses made by particular deductive programs and sent to the global database of rational hypotheses.

- 1.2. Single models upon global or specific rational hypotheses, which in the particular decision process play a key role because they affect a particular thing or being. For instance, the phenomenon El niño is located in the Pacific Ocean, hitting the coast of Peru and Los Andes with global consequences, such as hurricanes and very bad weather conditions around the world. If it were possible to track all the atmospheric consequences up to a point to predict a possible hurricane in Miami, it would be possible even to plan changes in the routes of all those affected flights. Another example is if there is an earthquake in Chile, what is the probability of a replica in San Francisco? And if the probability is high, what decisions should be made, for instance, in the airport of San Francisco?

- 2. Global model (the global comprehensive virtual model, fourth rational check).

- 2.1. The global model must integrate all particular single models based on particular rational hypotheses sent to the global database of rational hypotheses by the particular deductive programs.

- 2.2. The global model must integrate all single models based on global/specific rational hypotheses made by all global/specific programs, and regarding to particular decisions, paying attention to how in an interconnected world, the links between single models generate a network system of interconnections in which all particular thing or being is effected even from very remote factors, and how changes even in the most remote factor can have consequences in the most remote particular thing or being.

- 2.3. The sources of contradictions in the global model are: 1) how to link any single model, regardless of the level (global, specific, particular), in an interconnected mathematical model, and 2) possible full contradictions between single models from particular rational hypothesis from particular programs, and single models from global/specific particular rational hypothesis from global/specific programs, understanding for full contradictions those ones in which there is no possible solution and one of them should be discarded to avoid contradictions in the global model 3) partial contradictions, when there is a chance of solution, for instance, the contradiction is caused by the way in which the singles models have been linked with the current factors, but, using other links the contradiction is banished.

- 3. Actual model (the global comprehensive actual model, fifth rational check), once in the global model, all the singles models from particular and global/specific rational hypotheses have been integrated, avoiding contradictions or fixing possible partial contradictions, upon the mathematical equations in which these single models have been designed and integrated, the calculation of what values are expected, checking if the values are according to the real data within the margin of error, and if not, further researches to find out the source of error. One source of error could be that the links in the global model are incorrect. In the case of all those flights to Miami when a hurricane has been predicted, or to San Francisco when an earthquake has been predicted, to check if the high probability of risk is still rational or not, and if still rational, to carry out the emergency plan, and all those steps to divert all flights to Miami or to San Francisco, changing their routes to safer places.

- 4. The global prediction virtual model, having checked five times the global model, is time to make a virtual prediction. At a particular level is very important to be focused on what is happening in the prediction in San Francisco, Miami, and closer airports, to divert the flights to safer places.

- 5. The global evolution virtual model, having a global virtual prediction, analyses every single moment from the present to the virtual prediction, and every single moment corresponds to every single moment in the evolution from the global model to the prediction model. In relation to San Francisco and Miami, to model every single moment in the evolution of that earthquake or hurricane, observing possible evolutions in every geological replica or stream of air. Otherwise, some flights could be diverted to places where other replicas can happen, or the weather conditions are not really good for landing.

- 6. The global evolution actual model (sixth rational check), at any time, checks the values predicted for every moment with the real data in every moment, and if the data is not within the margin of error, in that case, to revise those equations in the global model and the prediction whose behaviour is not according with the real data. Comparing the data is possible to guess if an earthquake is really to happen in San Francisco or a Hurricane in Miami, because if, for any reason, the conditions change and there is no risk of earthquake or hurricane, the emergency plan could be called off, or if by chance in the sixth rational check is found out that possible replicas or bad weather conditions can happen in other places, in that case over the new evidences is necessary to prepare new plans of emergency for the new places under risk of earthquake or hurricane.

- 7. The global prediction actual model (seventh rational check), when the future predicted arrives, checks if the real values, within the margin of error, correspond to the predicted values, and if not, does further research to find out the source of error. As long as the earthquake or the hurricane is coming, the last research is to be sure that the estimations are correct and the plans are correct. Otherwise, make as many changes as the new situation demands.

Along with the possible particular decisions, by the Global Artificial Intelligence, regarding the particular flights to San Francisco or Miami when an earthquake or a hurricane is expected, other possible particular decisions are the particular decisions made by the particular Modelling System, in particular deductive programs.

Imagine that the airport of San Francisco and Miami have their own particular deductive programs, and every single jet has its own particular deductive program, as well as every possible new airport to receive the diverted flights has its own particular deductive program, and every particular deductive program has its own particular Modelling System, making mathematical representations upon the particular rational hypothesis made by the respective particular deductive program.

In this case, the Modelling System for the particular deductive program, making mathematical representations upon the particular rational hypothesis provided by the particular deductive program, is going to be able to make particular decisions, to be sent later to the Decisional System to be authorised.

The way in which the particular Modelling System for the particular deductive program works is not very different to the Modelling System in the Global Artificial Intelligence, but the particular Modelling System for the particular deductive program only includes particular rational hypotheses, and works as follows:

- 1. Particular single models: upon a particular rational hypothesis. For instance, if thousands of flights to San Francisco or Miami are diverted, every airport affected (San Francisco, Miami, and the new ones receiving diverted flights) as well as the jets, their respective particular deduction program makes immediately single models of every rational hypothesis about weather conditions or any other technological particular condition.

- 2. The particular model (the particular comprehensive virtual model, fourth rational check): made of the union of all the particular single models in only one model, as a comprehensive mathematical representation of that particular thing or being. The most important source of contradiction is how to link all the particular single models as a reflection of all the connections in which any particular thing or being is made. The particular deductive program of a new airport available to receive diverted flights, has to unite in its particular model, all the single models, observing contradictions in routes (avoiding crashes between flights using the same route), climatic conditions along the routes, etc... to fix the best routes for every flight diverted. At the same time, the particular deductive program of every jet makes its own particular models.

- 3. The particular actual model compares the data expected according to the particular model and the current real data. In every particular deductive program involved in the emergency plan to divert flights, to check all the time if the values expected for every factor involved in the plan are ok in comparison with the real data from their respective particular matrix. The fifth rational check

- 4. In the particular prediction virtual model, after five rational checks is time to make a prediction. In this example, a prediction of every factor involved in the flights diverted and the geological and climatic conditions, for instance, in case of a flight diverted from San Francisco to another airport, to ensure that along the journey, the flight is not going to come across any other geological activity. Or a flight diverted from Miami to another airport, predictions that during the journey, the flight is not going to encounter very bad weather conditions.

- 5. The particular evolution virtual model, as an estimation of every moment from the current particular model to the prediction virtual model

- 6. The particular evolution actual model, as the sixth rational check, checks that the real data from the particular matrix is right with the values predicted for every moment in this evolution, otherwise, other changes in the routes should be made.

- 7. The particular prediction actual model, the seventh check, ensures that the values predicted are within the margin of error in accordance with the real data, as long as the predicted moment is coming.

As it has been explained, for the development of particular decisions, there are at least two ways: 1) particular decisions made by the Global Artificial Intelligence based on a global model, including all single models from all global/specific and particular rational hypotheses, and 2) particular decisions made by particular programs based on their own particular model including only their respective particular rational decisions.

Because there are at least two ways to make particular decisions, in relation to this post about the second stage, the contradictions to find out in the models are:

- In the global model, possible contradictions exist when single models from particular rational hypotheses are integrated along with single models from global/specific rational hypotheses.

- Contradictions between the way in which single virtual models, based on particular rational hypotheses added to the global database of rational hypotheses, are represented and integrated into the global model, in comparison to the way in which the same rational hypotheses have been modelled and integrated into the particular model by the particular Modelling System.

- Further contradictions between prediction and evolutionary, virtual and actual models, between the Modelling System in the Global Artificial Intelligence and the Modelling System in the particular program, due to contradictions between the global model and particular models. Any contradiction between the global model and any other particular

model is going to be the cause of contradictions in the rest of the models: prediction or evolution, virtual or actual, models.

In addition to these contradictions, the possible contradictions to find out in the fifth, sixth, seventh, rational checks, as a result of contradictions between expected and real values for each result in each mathematical equation in each model based on a rational hypothesis, as a mathematical equation of the relation between factors in the, global or particular, matrix.

Some contradictions between particular models from particular programs and the global model by the Global Artificial Intelligence, are to be resolved as soon as the rational checks find evidence of these contradictions, locating the source of error. But in other cases, these contradictions are not going to be resolved until the last check, when, as soon as the predicted event arrives, every model has to adjust its values with the real coming values.

One of the reasons why some contradictions between the particular and the global can be resolved through rational checks is that some contradictions are caused by the time difference.

Some changes immediately registered by particular programs are not, after some time, registered by the global matrix.

Only when regular checks in the global database of rational hypotheses reveal these changes then the rational hypothesis associated with could be changed, adjusting the terms in which the respective models have been designed, and adapting them to the current measurements.

But even this process can take some time, and the longer it is, the riskier it is. In the experimentation for the development of a true Global Artificial Intelligence is necessary to shorten times in all processes.

Alike in the last post, I will finish this one regarding the second stage in the Modelling System at a particular level, developing some ideas about the key role that this technology could have in the development of cyborg psychology.

Until now, what I have explained about the relevance of particular applications for particular programs applied to human beings, is the possibility that, having developed a very sophisticated technology related to mind/emotional/perception reading a particular application for a particular program for a person, a personal particular program, can develop a deep comprehension about our humanity, what makes us special.

One of these possible developments is the development of personal particular programs able to provide assistance in any circumstance, when we are working, when we are driving, when we are doing sports, or enjoying our holidays. This future development will require the development of cyborg psychology, as a bridge between our current psychology to an advanced, improved and enhanced psychology.

In the evolution in cyborg psychology is possible to identify at least three phases:

- The first phase in cyborg psychology is where we are now, based on the outer assistance, for instance, the watch/calendar/agenda on our devices where we can set down any important alarm, appointment, meeting, event, the memory on our devices where we can keep important documents, videos, photographs, as well as all the assistance that we have to sort out our emails, lost calls, contacts or applications to do sport, meditation, or meet up or date with new people, among many others. All these applications could be named as outer assistance because all of them, in one way or another, what they do is to suggest decisions, decisions based on probabilities.

- The second phase in cyborg psychology, the inner assistance. Until now, we get used to being assisted by Artigicial Intelligence installed in our applications, as if they were outer assistance, in our mobile phone, tablet, laptop, computer, smart tv, but we are evolving to the next one, when the assistance is not outer, unless you decide to keep your old devices, because in the next phase the assistance can be a kind of inner assistance. Imagine that instead of taking a look from time to time at your devices, the inner assistance could be through earphones, glasses, headsets, equipped with mind-reading technology, if, right now, mind reading still causes social alarm, as soon as new devices of mind-reading are on the market, like our current Virtual Reality headsets, or the new meta AI glasses, it is not difficult to imagine what is the idea behind the fusion of companies like Neuralink and Artificial Intelligence.

- Finally, the third phase in the evolution towards cyborg psychology, the complete fusion or synthesis between a human brain and technological assistance.

While the second and third phases of cyborg psychology may still be emerging, current trends suggest they are becoming increasingly feasible. For now what we can affirm is that humanity is already in the first phase of the cyborg psychology evolution, where our applications in our smart phones, tablets, laptops, computers, smart TV, Virtual Reality headsets, or AI glasses, or our smart watch in our wrist, are right now part of our hands, our eyes, and our heads.

Rubén García Pedraza, 7th of July of 2018, London
Reviewed 25 August 2019, Madrid

Reviewed 19 August 2023, Madrid

Reviewed 10 May 2025, London, Leytostone

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